

Power Splitter/Combiner

SCP-5-1+

5 Way-0° 50Ω

2 to 200 MHz



Generic photo used for illustration purposes only
CASE STYLE: YY161

Maximum Ratings

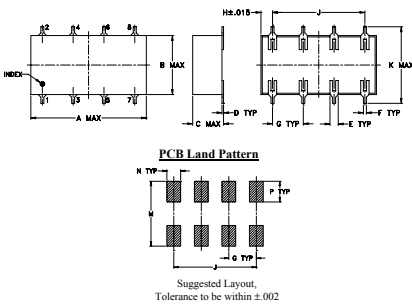
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.625W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	1
PORT 1	6
PORT 2	8
PORT 3	7
PORT 4	5
PORT 5	3
GROUND	2,4

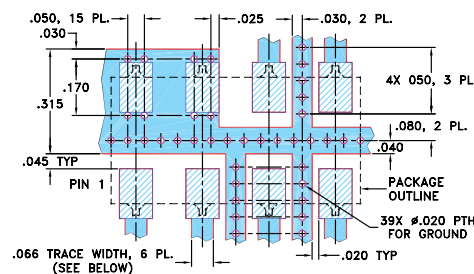
Outline Drawing



Outline Dimensions (inch)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08
H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

Demo Board MCL P/N: TB-213 Suggested PCB Layout (PL-104)



- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

- low insertion loss, 0.3 dB typ.
- high isolation 29 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.

Applications

- VHF
- instrumentation
- receivers/transmitters

Electrical Specifications

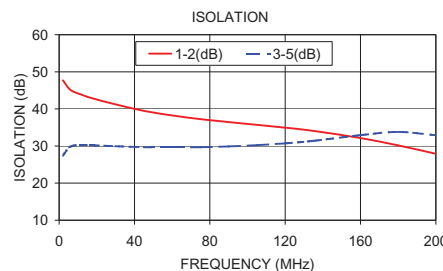
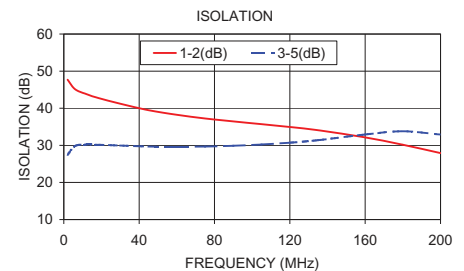
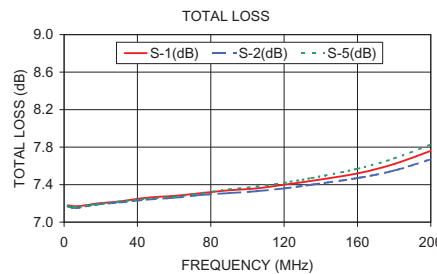
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 7.0 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
f_L - f_U	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
2-200	30	20	29	20	30	20	0.2	0.5	0.3	0.75	0.6	1.5	1	3	5	0.2	0.3	0.6

L = low range [f_L to $10f_L$] M = mid range [$10f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)					Amp. Unbal. (dB)	Isolation (dB)				Phase Unbal. (deg.)	VSWR S	VSWR OUTPUTS
	S-1	S-2	S-3	S-4	S-5		1-2	2-3	2-4	3-5			
2.00	7.18	7.17	7.17	7.17	7.17	0.01	47.70	45.82	27.74	27.47	0.04	1.10	1.18
6.00	7.17	7.15	7.16	7.16	7.16	0.02	45.13	44.43	30.00	29.83	0.09	1.09	1.12
12.00	7.18	7.17	7.18	7.17	7.18	0.01	43.80	43.17	30.31	30.22	0.19	1.08	1.10
18.00	7.20	7.19	7.19	7.19	7.19	0.01	42.81	42.17	30.23	30.17	0.27	1.08	1.10
30.00	7.22	7.21	7.21	7.21	7.22	0.01	41.21	40.49	29.90	29.95	0.46	1.07	1.10
45.00	7.26	7.24	7.23	7.24	7.25	0.02	39.48	38.73	29.59	29.68	0.60	1.06	1.10
60.00	7.28	7.26	7.26	7.26	7.27	0.02	38.25	37.46	29.48	29.63	0.88	1.06	1.11
75.00	7.31	7.29	7.28	7.30	7.31	0.03	37.24	36.46	29.46	29.68	1.03	1.06	1.11
90.00	7.34	7.31	7.31	7.32	7.35	0.04	36.45	35.56	29.57	29.88	1.23	1.06	1.11
105.00	7.36	7.33	7.33	7.34	7.38	0.05	35.72	34.77	29.72	30.22	1.45	1.07	1.11
120.00	7.40	7.36	7.37	7.37	7.42	0.05	34.94	33.93	30.03	30.72	1.58	1.09	1.11
135.00	7.44	7.40	7.40	7.41	7.47	0.07	34.07	32.98	30.42	31.40	1.76	1.12	1.12
160.00	7.52	7.47	7.46	7.48	7.57	0.11	32.14	31.04	31.11	32.92	2.04	1.19	1.12
180.00	7.62	7.55	7.55	7.58	7.68	0.13	30.17	29.10	31.10	33.81	2.35	1.28	1.13
200.00	7.76	7.67	7.67	7.70	7.83	0.16	27.91	26.91	29.96	32.90	2.63	1.40	1.14

1. Total Loss = Insertion Loss + 7dB splitter loss.



electrical schematic

